Lab3: prob1

Explanation to problem 1

The reason why one results in "false" and the other in "true" is due to the difference in object variable type at ***compile time and run time stages***. Both P1 and P2 are declared with the same type, which is the Person class, so at compile time, they are both considered to be of type Person. However, during runtime, P1 is an instance of PersonWithJob while P2 is an instance of Person.

When ***p1.equals(p2)*** is called, the equals method on P1 returns false because ***P2 is not an instance of PersonWithJob***. Conversely, when ***p2.equals(p1)*** is called, the equals method on P2 (Person class) is executed. Since ***p1 is an instance of Person*** and both objects have the ***same name (Joe)***, equals will return true in this case.

*** Our code is implemented to replaces inheritance with composition!